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**From:** Assunto, Carmen
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http://www.denverpost.com/environment/ci_28608746/epas-colorado-mine-disaster-plume-flows-west-toward

# Animas River: EPA's Colorado mine disaster plume flows west toward Grand Canyon

**Thousands of people living along the Animas River await water contamination test results**

*By Bruce Finley*
*The Denver Post*

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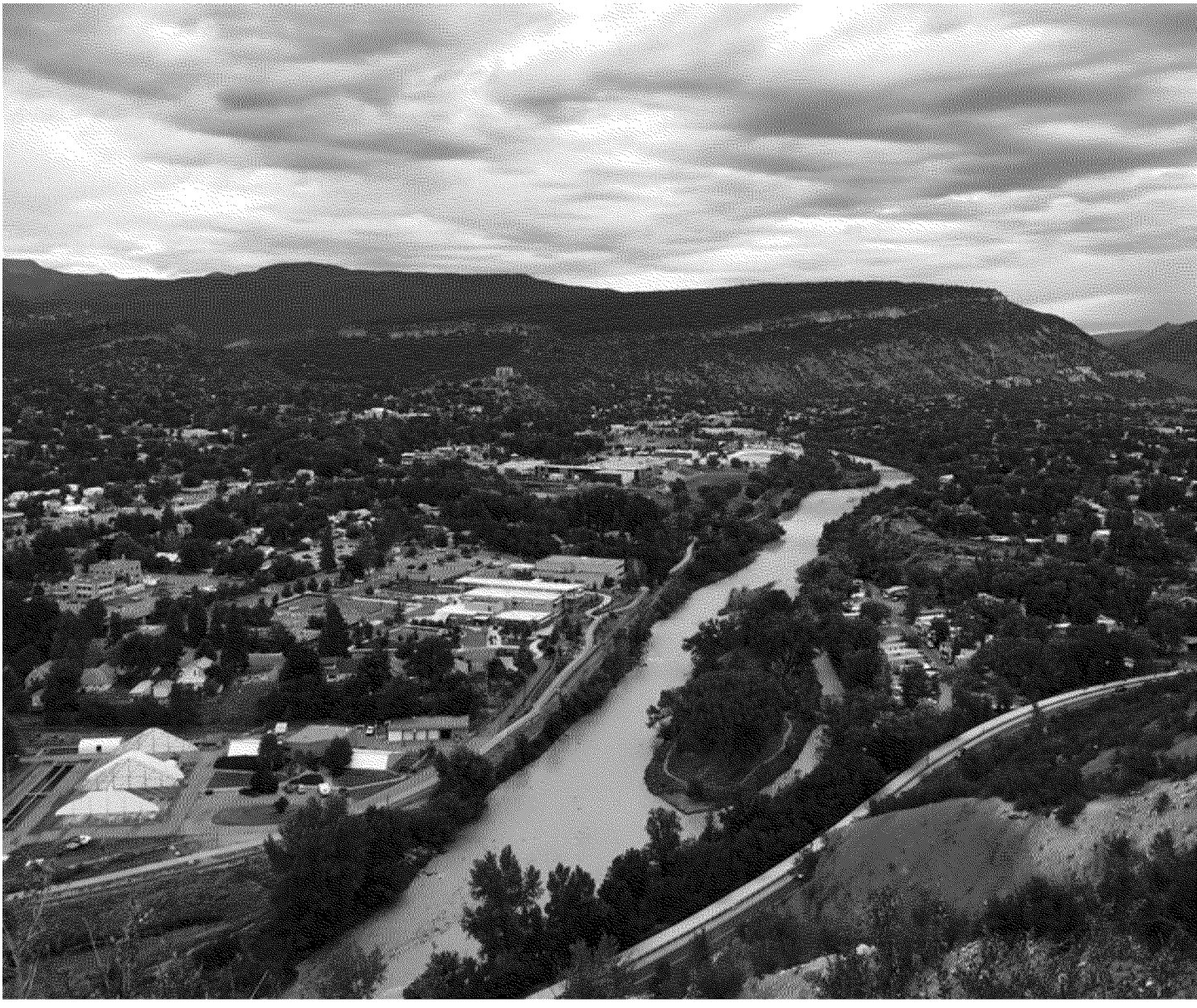

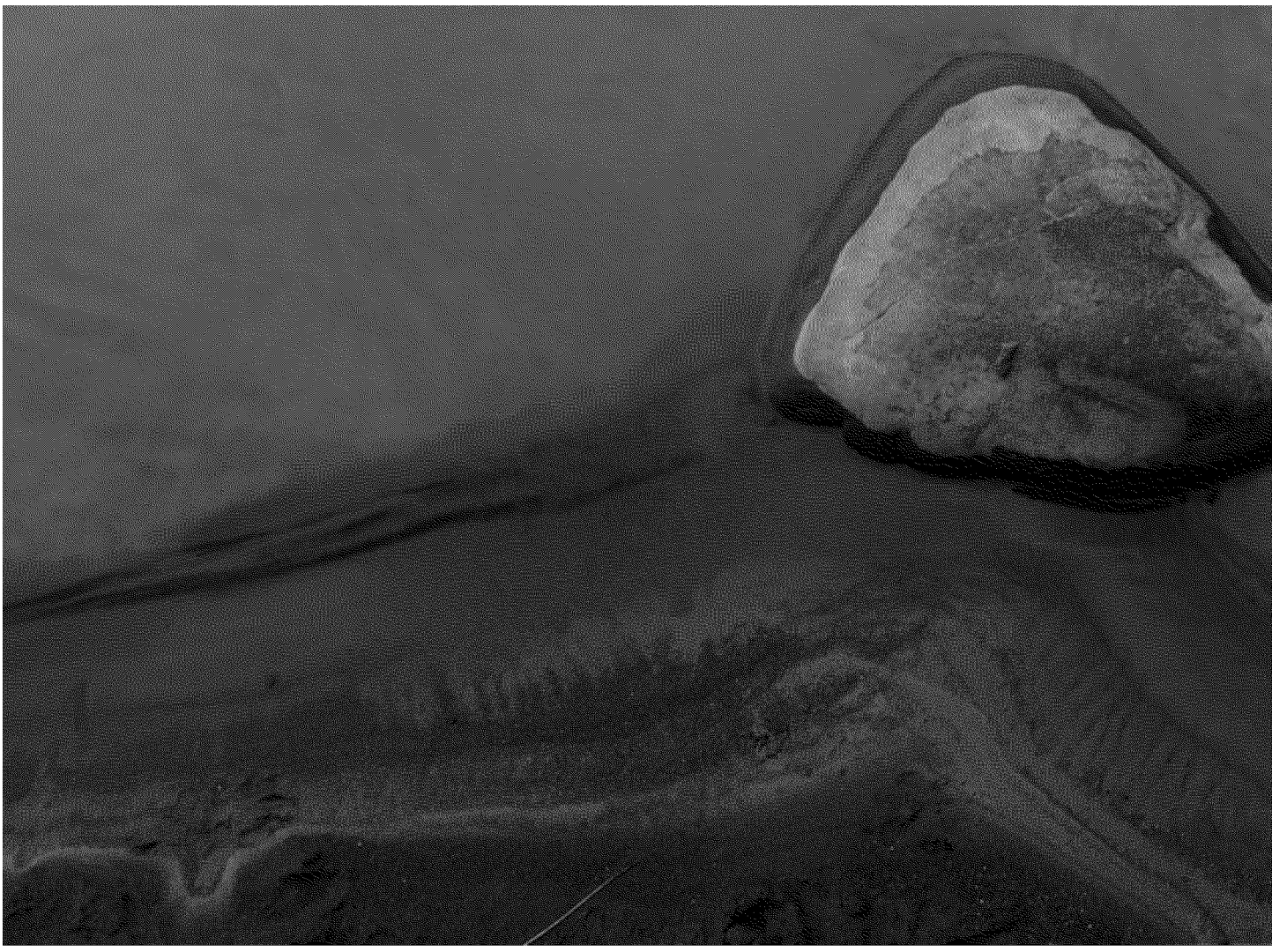

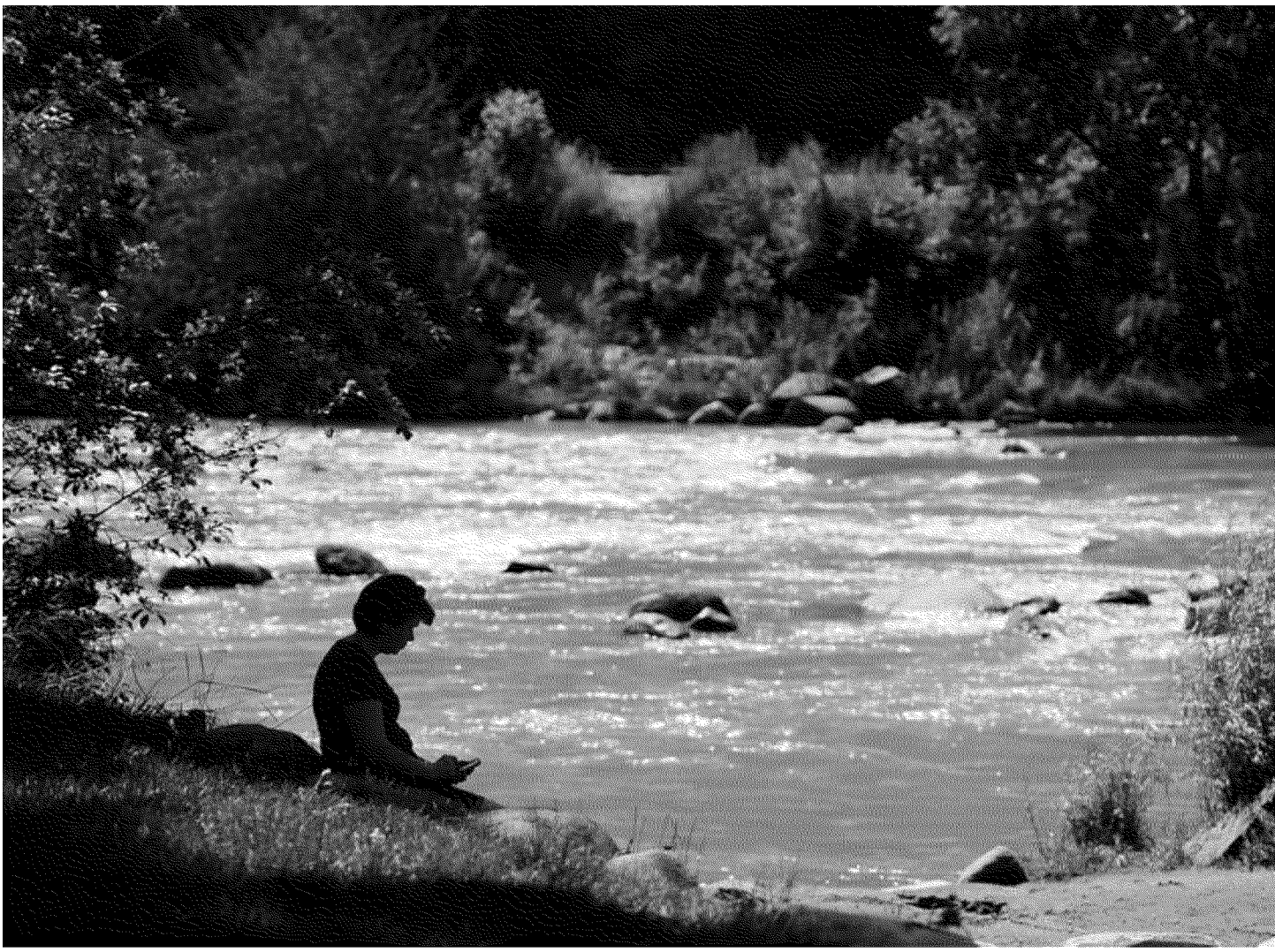

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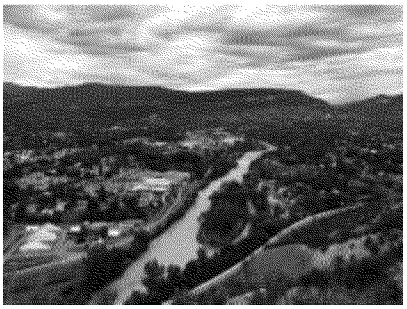
SILVERTON — Three days after EPA workers triggered a huge blowout at a festering mine in southwestern Colorado, a mustard-colored plume — still fed by 548 gallons leaking per minute — stretched more than 100 miles, spreading contaminants including cadmium, arsenic, copper, lead and zinc.

Environmental Protection Agency regional chief Shaun McGrath on Saturday conceded that

federal officials know the levels of the heavy metals in Cement Creek and the Animas River but would not reveal early testing results. "Those data sheets have not been finalized by the scientists," McGrath said. "As soon as we are able to release them, we will."



Polluted water flows down the Animas River Friday morning, August 7, 2015. (*Brent Lewis, The Denver Post*)

Potentially toxic contaminants had spread as far as a domestic well 60 miles away near Durango, which La Plata County officials said has prompted them to launch a well-testing operation for hundreds of residents. City water and irrigation intake gates were being shut in New Mexico and Navajo Country as the plume, moving at about 5 miles per hour, flowed from the Animas into the San Juan River.

Recent rain raised the prospect that yellow-orange sludge deposited along now-deadened black creek banks could be washed again into the Animas causing more harm. EPA crews sampling water had not tested the sludge, settling up to a half-inch thick at slower parts of the Animas above Durango (pop. 17,000). La Plata County director of emergency management Butch Knowlton said the sludge would be tested one way or another to protect public health. "The population that lives along this river is at the mercy of the EPA," he said.

And EPA officials at a command post in Durango could not rule out the possibility that contaminants will remain concentrated enough to appear yellow on Sunday when the plume is expected to approach Lake Powell and the Grand Canyon, carved by the Colorado River.

"It's hard to know what is going to happen as more river flows join it," said EPA's on-scene coordinator Craig Myers in Durango. "It is diluting. (The sludge of contaminants) is going to be settling out in places."

Wednesday's blowout, at the Gold King Mine in mountains above Silverton, showed the enormity of the problem of leaking old mines in Colorado and the West. Colorado natural resources officials overseeing old mines told The Denver Post they know of several hundred around the state leaking acid discharges into river headwaters. Cleanup has been done at about 9,000 abandoned mines, but the status of about 14,000 remains uncertain, said Bruce Stover, director of Colorado's inactive mine reclamation program.

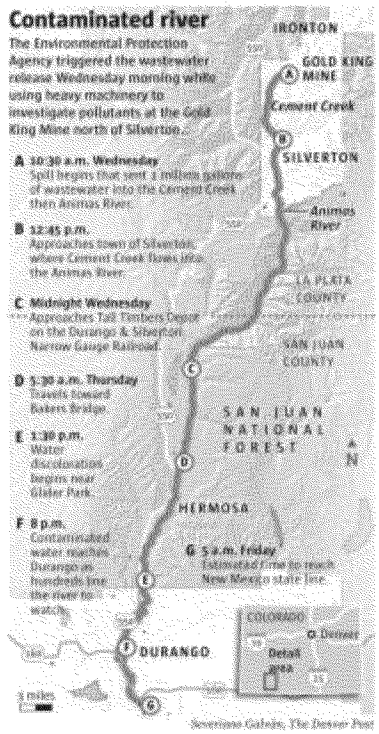
"We have got to tackle these eventually," Stover said. "(Gold King) is one of the mines we've been struggling with for years. We're trying to figure out what is going on and how to fix it. This is a vexing problem. ... Not everybody is on the same page."

For years, so-called "good Samaritan" environmental groups and landowners have pressed to embark on cooperative cleanups, only to be warned by the EPA that well-intentioned efforts at

old mines that make matters worse could face federal prosecution with those at fault held liable for massive environmental damage.

Now the EPA itself has caused such a mishap.

EPA mine sight coordinator Hays Griswold, one of four workers at Gold King when an estimated 1 million or more gallons of orange acid water blew through a loose dirt barrier, said he had been working to install a pipe to drain rising water in the mine. That project, he said after the disaster, "couldn't have worked. ... Nobody expected the water to be that high."

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An initial torrent tearing down from Gold King's collapsed portal (elevation 11,458 feet) wiped out a gray Suburban — now yellow - and ripped out trees and culverts as it raged into the main stem of the Animas. This raised the acidity of Cement Creek to pH 3.74, a level comparable to black coffee, EPA officials said, and in the Animas below Silverton at a level comparable to orange juice or Dr. Pepper (pH 4.8). And it spread the mustard-yellow sludge.

Griswold and state officials have been trying to reduce acid leakage from several mines in the area, including the Red and Bonita mine and the American Tunnel.

But that is tricky, unpredictable work at best, due to collapsed timbers and rock inside tunnels — especially in this area of the high San Juan Mountains.

In 1978, the altered state of the mountains after decades of hard-rock mining became obvious in a disaster known as the Emma Lake Incident. Across the 13,286-foot Bonita Peak that towers over Gold King, a tunnel from the nearby Sunnyside gold mine reached an area about 70 feet

under the alpine Emma Lake. That lake broke through into the tunnel on a Sunday, when miners weren't present, and all the water and sediment, black as oil, rocketed through the tunnel and shot out a portal along Cement Creek with a force that toppled a 20-ton locomotive.

Still, profitable gold mining continued in the area until around 1986. And old mines here have kept draining acid mine water, leached from exposed rock, laced with heavy metals. Gold King had been leaking at a rate of 200 gallons a minute before the EPA crew began digging to investigate the portal.

More than one contaminated stream may be contributing to the spreading mustard plume. "It is hard to say," EPA coordinator Myers said. "There are a number of draining adits up in that drainage that are not associated with the Gold King Mine."

EPA and contractor response crews Saturday were re-installing retention ponds and beginning to trap and screen out orange contaminants from a flowing Gold King discharge. Senior EPA officials said they're revising their 1 million gallon estimate of the volume of the blowout surge. (The Animas River at Durango, still mustard-colored Saturday night, flows at a rate of 360,000 gallons a minute.)

Silverton and San Juan County officials have resisted efforts to launch a full-scale federal "Superfund" cleanup to address this problem due to fears of a stigma that could hurt the tourism they count on for business.

"These are historic abandoned mines that have had acid drainage for decades. That is the very reason why we were up there," EPA regional chief McGrath said. "We were trying to reach that drainage coming off the Gold King Mine. They were trying to put in a treatment system.

"We have been in conversations with the town of Silverton ... and the state of Colorado about listing this area under Superfund. And if it is listed then, of course, removal (of waste) is part of Superfund that would allow us to take action up there. ... We have not been able to move this area to a listing under the Superfund."

Sincerely,

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